

STATE OF CALIFORNIA
Budget Change Proposal - Cover Sheet
DF-46 (REV 02/15)

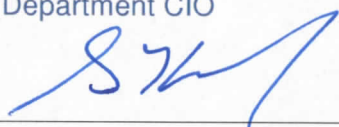
Fiscal Year 2016/17	Business Unit 2720	Department California Highway Patrol	Priority No. 2
Budget Request Name 2720-002-BCP-BR-2016-GB		Program VARIOUS	Subprogram

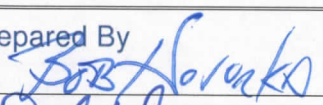
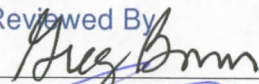
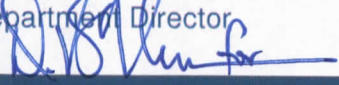
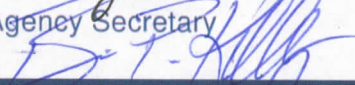
Budget Request Description

Expanded Network Infrastructure

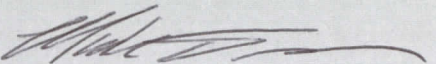
Budget Request Summary

The California Highway Patrol (CHP) requests permanent funding of \$1.715 million from the Motor Vehicle Account to cover increased costs associated with expanding network bandwidth capacity throughout the state. Additional capacity is necessary to address current bandwidth deficiencies. The network infrastructure upgrade will improve data and system security in support of the California State Transportation Agency's mission of maintaining and improving the mobility of those utilizing the state's varied transportation systems.

Requires Legislation <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Code Section(s) to be Added/Amended/Repealed	
Does this BCP contain information technology (IT) components? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, departmental Chief Information Officer must sign.</i>	Department CIO 	Date 11-3-15
For IT requests, specify the date a Special Project Report (SPR) or Feasibility Study Report (FSR) was approved by the Department of Technology, or previously by the Department of Finance. <input type="checkbox"/> FSR <input type="checkbox"/> SPR Project No. Date:		

If proposal affects another department, does other department concur with proposal? <input type="checkbox"/> Yes <input type="checkbox"/> No <i>Attach comments of affected department, signed and dated by the department director or designee.</i>			
Prepared By 	Date 10-30-15	Reviewed By 	Date 10-30-15
Department Director 	Date 11/5/15	Agency Secretary 	Date 12/3/15

Department of Finance Use Only

Additional Review: <input type="checkbox"/> Capital Outlay <input type="checkbox"/> ITCU <input type="checkbox"/> FSCU <input type="checkbox"/> OSAE <input type="checkbox"/> CALSTARS <input type="checkbox"/> Dept. of Technology	
BCP Type: <input type="checkbox"/> Policy <input type="checkbox"/> Workload Budget per Government Code 13308.05	
PPBA 	Date submitted to the Legislature 1/7/16

A. Budget Request Summary

The California Highway Patrol (CHP) requests permanent funding of \$1.715 million from the Motor Vehicle Account to cover increased costs associated with expanding network bandwidth capacity throughout the state. Additional capacity is necessary to address current bandwidth deficiencies. The network infrastructure upgrade will improve data and system security in support of the California State Transportation Agency's mission of maintaining and improving the mobility of those utilizing the state's varied transportation systems.

B. Background/History

The network infrastructure is indispensable for facilitating CHP's mission-critical work. It provides connectivity to the headquarters campus, eight field Divisions, 102 Area offices, 25 communications centers, and 16 inspection facilities. The network infrastructure currently manages, deploys, and provides access to these and other mission critical systems:

- Computer-Aided Dispatch
- Voice over Internet Protocol Telephony Services
- California Law Enforcement Telecommunications System
- California Department of Justice Information Databases
- California Department of Motor Vehicle Databases
- National Law Enforcement Telecommunications System
- National Crime Information Center
- Email Services
- Statewide Integrated Traffic Records System
- Statewide Pursuit Information Database and Resource System
- Daily Field Shift Log, California Automated Reporting System

Network bandwidth of data circuits determines how much data may be transmitted at any given time and the speed of the transmission. The network directs transmissions with more than 400 routers, 2,000 switches, and 232 data circuits of varying speed and capacity, 192 of which are T-1 with a bandwidth of 1.544 megabits per second per line.

The CHP contracts with commercial vendors for data circuits. The cost of these services is presented below.

Resource History
(Dollars in thousands)

Program Budget	2011/12	2012/13	2013/14	2014/15	2015/16
Authorized Expenditures	2,500	2,500	2,500	2,500	2,500
Actual Expenditures	2,403	2,583	2,612	2,200*	4,068*

* Estimated

Attachment A lists the type and number of data circuits and their costs through fiscal year 2015/16; it also shows the proposed upgrades and their associated costs by fiscal year 2016/17. The CHP budgets \$2.5 million each year for data circuit costs. These costs are projected to rise to \$4.215 million by fiscal year 2016/17, leaving a funding shortfall of \$1.715 million, which CHP cannot absorb within its existing budget authority.

C. State Level Considerations

California state agencies, including CHP, are expected to make the best use of scarce state technical resources in an increasingly complex computing world. The expanded network is essential to the support of public safety and law enforcement. The network infrastructure improvements support the California State Transportation Agency's mission of maintaining and improving the mobility of those utilizing the state's varied transportation systems.

D. Justification

Approximately 33 percent of the 232 current data circuits exceed existing bandwidth on a regular basis. Increasing the network bandwidth involves two steps: the first step is to ensure the existing hardware and software is capable of managing increased bandwidth. The Department has already begun to replace hardware and software to comply with changes to network transmission methodologies imposed by the commercial vendors providing the service. The new hardware infrastructure is expected to be completely installed by fiscal year 2016/17.

The second step for increasing network bandwidth is simply contracting with the commercial vendors for greater bandwidth. The improvements will provide the following benefits:

- Increased operational efficiency
- Faster deployment of new applications and services
- Increased scalability
- Better control and visibility
- Compliance with Federal Criminal Justice Information System regulations and requirements
- Compliance with California Department of Justice requirements
- Improved delivery of information services in support of law enforcement activities
- Enhance CHP's business customers' experiences
- Reduce the risk of litigation from loss of data or security breaches
- Adapt more quickly and confidently to today's changing security threat and crime landscape
- Provide the ability to adapt to ever-changing and increasing security threats

E. Outcomes and Accountability

This proposal will ensure that CHP has sufficient funds to cover its operational expenses while improving performance of its Wide Area Network without impact to its other essential duties. The CHP will continue to monitor expenditures.

The upgraded network infrastructure will be able to accommodate CHP's growing data demands while at the same time improving data and system security.

F. Analysis of All Feasible Alternatives

1. Approve a permanent budget augmentation of \$1.715 million to cover increased costs associated with expanding and increasing network data circuits bandwidth capacity throughout the state.

Pro: This option will allow CHP to accommodate CHP's intensive data demands while at the same time improving data and system security.

Con: This option imposes a significant and on-going cost to the Motor Vehicle Account.

2. Deny this request.

Pro: This option helps preserve the solvency of the Motor Vehicle Account.

Con: This option will require that CHP maintain its existing network infrastructure and bandwidth or redirect resources. This will result in a system not capable of meeting CHP's growing data and system requirements. Alternatively, if CHP is required to absorb these costs within its existing budget authority, funds would have to be diverted from other activities or savings would have to be achieved by other means, such as allowing the number of vacant officer positions to rise.

The CHP's current budget does not allow for absorbing these costs. If required to do so, CHP would have to determine which activities to curtail (e.g., reduced flight operations) or allow officer vacancies to rise to a level sufficient to fund these costs.

G. Implementation Plan

Effective July 1, 2016, or upon enactment of the fiscal year 2016/17 budget, CHP would begin leasing higher speed data circuits to improve the network speed and capacity of its Wide Area Network.

H. Supplemental Information

All costs associated with the network expansion are calculated using the state's CALNET 3 contract and California Government Enterprise Network pricing schedules. Actual services would be provided by AT&T or Verizon.

I. Recommendation

The CHP recommends Alternative 1, a permanent budget augmentation of \$1.715 million to cover increased costs associated with expanding and increasing network data circuits bandwidth capacity throughout the state.

BCP Fiscal Detail Sheet

BCP Title: Expanded Network Infrastructure

DP Name: 2720-002-BCP-DP-2016-GB

Budget Request Summary

	FY16					
	CY	BY	BY+1	BY+2	BY+3	BY+4
Operating Expenses and Equipment						
5346 - Information Technology	0	1,715	1,715	1,715	1,715	1,715
Total Operating Expenses and Equipment	\$0	\$1,715	\$1,715	\$1,715	\$1,715	\$1,715
Total Budget Request	\$0	\$1,715	\$1,715	\$1,715	\$1,715	\$1,715

Fund Summary

Fund Source - State Operations

0044 - Motor Vehicle Account, State
Transportation Fund

	0	1,715	1,715	1,715	1,715	1,715
Total State Operations Expenditures	\$0	\$1,715	\$1,715	\$1,715	\$1,715	\$1,715
Total All Funds	\$0	\$1,715	\$1,715	\$1,715	\$1,715	\$1,715

Program Summary

Program Funding

2050010 - Ground Operations	0	1,519	1,519	1,519	1,519	1,519
2050019 - Flight Operations	0	44	44	44	44	44
2055010 - School Pupil Transportation Safety	0	12	12	12	12	12
2055019 - Regulated Special Purpose Vehicles	0	2	2	2	2	2
2055028 - Transportation of Hazardous Materials	0	9	9	9	9	9
2055046 - Commercial Vehicle Inspection Enforcement	0	53	53	53	53	53
2055055 - Motor Carrier Safety Operations	0	27	27	27	27	27
2060010 - Vehicle Theft Control	0	45	45	45	45	45
2060019 - Vehicle Identification Numbering Program	0	4	4	4	4	4
Total All Programs	\$0	\$1,715	\$1,715	\$1,715	\$1,715	\$1,715

California Highway Patrol Network Circuits

Current Data Circuits (Fiscal Year 2015/16)

Circuit Type	Speed*	Cost	Circuit Count	Total Cost
T-1	1.50	\$ 11,280	157	\$ 1,770,960
Bundled T-1 (3)	3.07	33,840	27	913,680
ASE - 5 MB	5.00	12,580	6	75,480
Bundled T-1 (4)	6.00	45,120	1	45,120
Bundled T-1 (6)	9.00	67,680	6	406,080
ASE - 10 MB	10.00	45,732	5	228,660
Bundled T-1 (7)	12.20	78,960	1	78,960
DS-3	19.00	45,732	1	45,732
ASE - 20 MB	20.00	12,108	17	205,836
DS-3	40.00	45,732	3	137,196
ASE - 50 MB	50.00	19,505	6	117,030
ASE - 70	70.00	21,705	2	43,410
			232	\$ 4,068,144

Proposed Upgrades (Fiscal Year 2016/17)

Circuit Type	Speed*	Cost	Circuit Count	Total Cost
T-1	1.50	\$ 11,280	70	\$ 789,600
Bundled T-1 (3)	3.07	33,840	18	609,120
ASE - 5 MB	5.00	12,580	5	62,900
Bundled T-1 (4)	6.00	45,120	1	45,120
Bundled T-1 (6)	9.00	67,680	4	270,720
ASE - 10 MB	10.00	45,732	6	274,392
Bundled T-1 (7)	12.20	78,960	1	78,960
Bundled T-1 (8)	15.00	90,240	0	-
DS-3	19.00	45,732	1	45,732
ASE - 20 MB	20.00	12,108	85	1,029,180
DS-3	40.00	45,732	3	137,196
ASE - 50 MB	50.00	19,505	5	97,525
ASE - 70	70.00	21,705	2	43,410
ASE-100	100.00	27,612	1	27,612
ASE-500	500.00	70,332	10	703,320
ASE-1 Gig	1000.00	70,977	0	-
			212	\$ 4,214,787
			Base Funding	(2,500,000)
			Augmentation Needed	\$ 1,714,787

* = Megabits per second